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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,527	11/30/2001	Peter J. Melsa	TI-33111	6081

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EXAMINER

BRINEY III, WALTER F

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/997,527	Applicant(s) MELSA, PETER J.	
	Examiner Walter F. Briney III	Art Unit 2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9-24 and 26-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7, 9-11, 15-24 and 26 is/are allowed.
- 6) ☒ Claim(s) 12-14 and 27-30 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim 5 is objected to because of the following informalities:

- By using double brackets and an underline, the applicant has simultaneously added and deleted a period from the end of claim 5.
As such, no period exists at the end of claim 5.

Appropriate correction is required. A period may be added by simply providing an underlined period in the next response.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. **Claims 12-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Claims 12-14 are recited as depending on claim 8, which has been cancelled pursuant to the applicant's instant reply. As all limitations of claim 8 have now been incorporated into claim 1, it is assumed for the purposes of this action that claims 12-14 depend on claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2644

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 27-30 are rejected under 35 U.S.C. 102(b) as being anticipated by André (US Patent 6,028,486), with further evidence found in Gorcea et al. (US Patent 6,323,733).**

Claim 27 is limited to a *programmable peak detector*. André discloses a method and apparatus for reducing power dissipation in multi-carrier amplifiers (i.e. DSL amplifiers). See Abstract. With respect to figure 9, it is clearly seen that a digital input signal is compared to a threshold within a digital comparator (58), to determine whether the input signal is either above or below the threshold. The result is indicated as a switch control signal. The switch control signal operates to select between one of two voltage levels (44) and (46), or V_{high} and V_{low} . See column 5, lines 22-29.

With respect to the claim limitations, the digital input of figure 9 corresponds to the *digital data signal*. The switch control signal of figure 9 corresponds to the *logic signal* having a first logic value and a second logic value as indicated in column 5, lines 22-29. The threshold value is set so that a lower power supply value is selected most of the time, while reserving the use of the higher power supply only for the occurrence of peaks. See column 2, lines 38-45. André also indicates that DSL systems approximate a normal distribution. See column 1, lines 56-65.

As is known to anyone of ordinary skill in the art, this means that the average or RMS value of the digital data signal occurs most frequently, while peak values that typically lie outside the bounds of the standard deviation are much less frequent. Gorcea et al. (US Patent 6,323,733), further evidences this assumption by stating in column 1, line 65, through column 2, line 25, that the system of André associates the

Art Unit: 2644

lower power supply with the RMS value of the input signal and the upper power supply with a peak value of the input signal. In this way, André accomplishes the task of using a lower power supply most of the time, as stated in column 2, lines 38-45 of André.

Returning to the claim limitations, the apparatus of André specifically sets the threshold to a value that is above the *RMS* of the digital data signal but is supported by the first operating voltage (i.e. V_{low}). In addition, the threshold is set so when the digital data signal will surpass the *peak value* of the first operating voltage, the second operating voltage (i.e. V_{high}) will be used. As Gorcea simply evidences the truth behind the disclosure of André, André anticipates all limitations of the claim.

Claim 28 is limited to a *programmable peak detector according to claim 27*, as covered by André. Any programmable value is inherently capable of being modified by an overhead value. Therefore, André anticipates all limitations of the claim.

Claim 29 is limited to a *method of operating an amplifier*. The steps of receiving and outputting have already been treated in connection with the rejection of claim 27, as covered by André. In addition to these steps, claim 29 is limited to selecting between a first operating voltage level and a second operating voltage level in response to the first or second logic value. André clearly discloses in column 5, lines 22-29, that the comparison result (i.e. *logic value*) causes the selection of either a first (V_{low}) or second (V_{high}) operating voltage level. In addition, the choice of a threshold value was also treated in the rejection of claim 27. Therefore, André anticipates all limitations of the claim.

Claim 30 is limited to *a method according to claim 29* as covered by André. Any programmable value (i.e. *threshold value*) is inherently capable of being modified by an *overhead value*. Therefore, André anticipates all limitations of the claim.

Allowable Subject Matter

The following is a statement of reasons for the indication of allowable subject matter:

3. **Claims 1-7, 9-11, 15-24 and 26 are allowed.**

Claim 1 is limited to *a line driver*. As was shown in the Non-Final Office Action filed 26 August 2004, claim 8 was allowable over Fujiwara in view of Myers because the system of Fujiwara in view of Myers failed to suggest or make obvious *associating the threshold with a proportionality between a peak value associated with the first operating voltage level and an RMS value associated with the first operating voltage level*. The system disclosed by Fujiwara amplifies signals stored on some type of digital medium, typically a CD, which can store various recordings, such as voice and music. As such, it is not clear what the typical RMS value of each recording will be, as different recordings have different mastering levels. It follows that the threshold is not clearly set with regard to an RMS and peak value. By incorporating this limitation into claim 1, it is established that claim 1 is allowable over Fujiwara in view of Myers.

Claims 2-7 and 9 are dependent on claim 1, and are allowable over Fujiwara in view of Myers for at least the same reasons.

Claim 10 is limited to a *method of operation of a line driver*. The steps recited therein have a direct and one-to-one correspondence with the elements of claim 1, and thus, establish that claim 10 is essentially the same as claim 1. It follows that claim 10 is allowable over Fujiwara in view of Myers for at least the same reasons presented above with respect to claim 1.

Claims 11 and 15-17 are dependent on claim 10, and are allowable over Fujiwara in view of Myers for at least the same reasons.

Claim 18 is limited to a *line driver system*. The elements recited therein have a direct and one-to-one correspondence with the elements of claim 1, and thus, establish that claim 18 is essentially the same as claim 1. It follows that claim 18 is allowable over Fujiwara in view of Myers for at least the same reasons presented above with respect to claim 1.

Claims 19-24 and 26 are dependent on claim 18, and are allowable over Fujiwara in view of Myers for at least the same reasons.

4. **Claims 12-14** would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Claims 12-14 are presumed to depend on claim 1, and would be allowable over Fujiwara in view of Myers for at least the same reasons in the event that the rejections under 35 U.S.C. § 112 second paragraph are properly overcome.

Response to Arguments

Applicant's arguments filed 19 November 2004 with respect to claims 1-26 have been fully considered and are persuasive. The rejections under 35 U.S.C. § 102(b) of claims 1-7, 9-24 and 26 have been withdrawn.

Applicant has not provide any argument regarding newly added claims 27-30, which have been addressed in the preceding section entitled *Claim Rejections - 35 USC § 102*.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 2644

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter F. Briney III whose telephone number is 571-272-7513. The examiner can normally be reached on M-F 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WFB
5/5/05



SINH TRAN
SUPERVISORY PATENT EXAMINER